

Title (en)  
High differential pressure control valve

Title (de)  
Hochdifferenzdruck-Regelventil

Title (fr)  
Soupape de réglage à haute pression différentielle

Publication  
**EP 0591873 B1 19980204 (EN)**

Application  
**EP 93115931 A 19931001**

Priority  
JP 29811192 A 19921009

Abstract (en)  
[origin: EP0591873A1] A high differential pressure control valve having a plurality of stages of high resistance ports (41,43) forming a high resistance passage and one or more low resistance ports (51) forming a low resistance passage in a cage. The number of stages of low resistance ports is smaller than that of the high resistance ports so that a fluid at the side of an inlet passage (12) is introduced into the high resistance passage under a low open degree range and into both the low resistance passage and the high resistance passage under a medium and a high open degree ranges. <IMAGE>

IPC 1-7  
**F16K 47/04**

IPC 8 full level  
**F16K 3/24** (2006.01); **F16K 3/26** (2006.01); **F16K 47/02** (2006.01); **F16K 47/04** (2006.01)

CPC (source: EP US)  
**F16K 47/04** (2013.01 - EP US); **Y10T 137/86509** (2015.04 - EP US); **Y10T 137/86734** (2015.04 - EP US); **Y10T 137/86807** (2015.04 - EP US); **Y10T 137/86887** (2015.04 - EP US)

Cited by  
CN102128308A; ITFI20120074A1; DE10056715C5; AU751916B2; CN103821979A; CN113898754A; EP1069353A3; EP2716945A1; GB2506657A; EP3121497A1; US8387666B2; US10808849B2; WO2011085974A1; WO2013152993A1; US9638342B2; US8430131B2; WO2006031161A1; US7735514B2; US9140380B2; WO9826168A1; WO2012115702A1

Designated contracting state (EPC)  
DE FR GB IT

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**EP 0591873 A1 19940413; EP 0591873 B1 19980204**; AU 4608593 A 19940421; AU 651529 B2 19940721; CA 2105120 A1 19940410; CA 2105120 C 19980505; CN 1030859 C 19960131; CN 1089705 A 19940720; DE 69316821 D1 19980312; DE 69316821 T2 19980528; JP H06123366 A 19940506; JP H073263 B2 19950118; KR 0133270 B1 19980411; US 5351717 A 19941004

DOCDB simple family (application)  
**EP 93115931 A 19931001**; AU 4608593 A 19930902; CA 2105120 A 19930830; CN 93118510 A 19931009; DE 69316821 T 19931001; JP 29811192 A 19921009; KR 930017847 A 19930906; US 11328193 A 19930827